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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,587	02/08/2001	Eric D. Edwards	50N3708.01/1568	1290

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EXAMINER

KASSA, YOSEF

ART UNIT PAPER NUMBER

2625

DATE MAILED: 03/29/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/781,587

Applicant(s)

EDWARDS, ERIC D.

Examiner

YOSEF KASSA

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22, 24-52, and 54-62 is/are rejected.
- 7) ☒ Claim(s) 23 and 53 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/08/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-22, 24-28, 30, 31-52, 54-58 and 60-62 rejected under 35 U.S.C. 102(e) as being anticipated by Chen (6,552,744).

With regard to claim 1, Chen discloses a panorama manager, i.e., processor 19 of Fig. 1, configured to selectively generate one or more image parameters corresponding to adjacent frames of image data that are captured by imaging device (see col. 5, lines 42-59); and a processor that controls said panorama manager to thereby implement said panorama mode (see col. 3, lines 44-53).

With regard to claim 2, Chen discloses imaging device is implemented as one of a digital still camera and a digital scanner device (see col. 2, lines 14-19 and col. 1, lines 38-44).

With regard to claim 3, Chen discloses an image-stitching software program combines adjacent frames of image data to form a composite panorama image (see col. 3, lines 38-43).

With regard to claim 4, Chen discloses panorama manager selects one or more image parameters to avoid an excessive variation between said adjacent frames of image data to thereby create a cohesive composite image quality for composite panorama image (see col. 5, lines 35-40).

With regard to claim 5, Chen discloses one or more image parameters include at least one of an exposure parameter, a white-balance parameter, a brightness parameter, a contrast parameter, a sharpness parameter, a hue parameter, a saturation parameter, and a color balance parameter (see col. 8, lines 19-24).

With regard to claim 6, Chen discloses imaging device includes a capture subsystem, a viewfinder, and a control module, said control module having a processor, a memory, and an input/output interface (see col. 2, lines 51-65).

With regard to claim 7, Chen discloses memory includes at least one of an application software program, an operating system, a panorama manager, frame buffers, a display manager, image data, an auto-correction module, and image parameters (see col. 3, lines 12-15).

With regard to claim 8, Chen discloses a system user selects a panorama mode for operating imaging device (see col. 2, lines 52-57).

With regard to claim 9, Chen discloses imaging device captures and stores an initial frame of adjacent frames of image data (see col. 3, lines 3-8).

With regard to claim 10, Chen discloses panorama manager stores an initial image parameter value that corresponds to initial frame of image data (see col. 3, lines 37-43).

With regard to claim 11, Chen discloses panorama manager disables an auto-

correction module which automatically selects said one or more image parameters for said imaging device (see col. 3, lines 37-43).

With regard to claim 12, Chen discloses imaging device captures all of adjacent frames of image data by utilizing initial image parameter value from said initial frame of said image data (see col. 5, lines 9-16).

With regard to claim 13, Chen discloses panorama manager disables an auto-correction module which automatically selects one or more image parameters for imaging device (see col. 8, lines 13-18).

With regard to claim 14, Chen discloses display manager and panorama manager display a user interface that prompts system user to perform a sweep procedure across a panorama target area with imaging device (see col. 8, lines 8-18).

With regard to claim 15, Chen discloses imaging device samples and stores a parameter range of current image parameter values from panorama target area (see col. 3, lines 12-27).

With regard to claim 16, Chen discloses panorama manager selects a global parameter value from parameter range of current image parameter values (see col. 3, lines 60-67).

With regard to claim 17, Chen discloses panorama manager selects said global parameter value by calculating one of an average value of said parameter range and a mean value of parameter range (see col. 6, lines 1-9).

With regard to claim 18, Chen discloses panorama manager selects global parameter value by comparing said parameter range of current parameter values to a

pre-determined global parameter lookup table (see col. 5, lines 45-59).

With regard to claim 19, Chen discloses imaging device captures adjacent frames of image data by utilizing global parameter value (see col. 3, lines 60-67).

With regard to claim 20, Chen discloses imaging device captures and stores an initial frame of image data into frame buffers at a prior frame location (see col. 3, lines 20-27).

With regard to claim 21, Chen discloses imaging device captures and stores a next frame of image data into frame buffers at a current frame location (see col. 3, lines 20-27).

With regard to claim 22, Chen discloses panorama manager performs a transition processing procedure on image data from prior frame location of frame buffers (see col. 3, lines 12-19).

With regard to claim 24, Chen discloses transition processing procedure proceeds in a sequence that is selected from one or more of a left-right sequence, a right-left sequence, an up-down sequence, and a down-up sequence (see Fig. 5, item 23b).

With regard to claim 25, Chen discloses imaging device archives image data from prior frame location of frame buffers after transition processing procedure is completed (see col. 3, lines 19-27).

With regard to claim 26, Chen discloses panorama manager transfers said image data from said current frame location of said frame buffers into said prior frame location of said frame buffers after said imaging device archives said image data that has been processed during said transition processing procedure (see col. 6, lines 39-56).

With regard to claim 27, Chen discloses imaging device repeatedly captures and processes successive pairs of adjacent frames of image data using said transition processing procedure (see col. 6, lines 57-65).

With regard to claim 28, Chen discloses imaging device captures and stores all of adjacent frames of image data, and wherein panorama manager performs a global transition processing procedure on all of adjacent frames in a substantially concurrent event (see col. 3, lines 60-67).

With regard to claim 30, Chen discloses imaging device captures adjacent frames of image data in a selectable sequence that includes at least one of a left-right sequence, a right-left sequence, an up-down sequence, and a down-up sequence (see col. 6, lines 16-28).

Claims 31, 61 and 62 are similarly analyzed as claim 1.

Claims 32-52 and 54-58 and 60 are similarly analyzed as claims 2-22 and 24-28 and 30.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (6,552,744), and further in view of Szeliski et al (6,009,190).

With regard to claims 29 and 59, while Chen discloses the step of create a cohesive combined panorama image, he is silent about the step of an image processing program on a remote computer device performs a transition processing procedure on adjacent frames of image data. However, at the same field of endeavor, Szelicki discloses this feature (see col. 7, lines 60-65). At the time of invention, it would have been obvious to incorporate the teaching of Szelicki remote processing device into Chen system. The motivation doing so is to create full view panoramic mosaic image from plurality of images sequences.

Allowable Subject Matter

3. Claims 23 and 53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art Cited

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. (5,940,641) to McIntyre et al discloses extending panoramic images.

US Patent No. (5,018,177) to McDavid et al discloses apparatus and method for producing digital panoramic x-ray.

US Patent No. (5,657,073) to Henley disclose seamless multi-camera panoramic image...

US Patent No. (6,563,960) to Chan et al disclose methods for merging images.

US Patent No. (5,479,270) to Taylor disclose methods and apparatus for aligning depth images.

US Patent No. (6,078,701) to Hsu et al disclose methods and apparatus for performing local to...

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (703) 306-5918. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

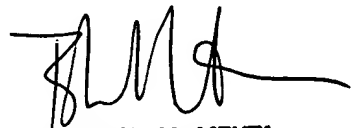
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BHAVESH MEHTA can be reached on (703) 308-5246. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communication and (703) 872-9306 for after Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (703) 306-5631. The group receptionist number for TC 2600 is (703) 305-4700.

PATENT EXAMINER

Yosef Kassa

03/15/04.


BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600